

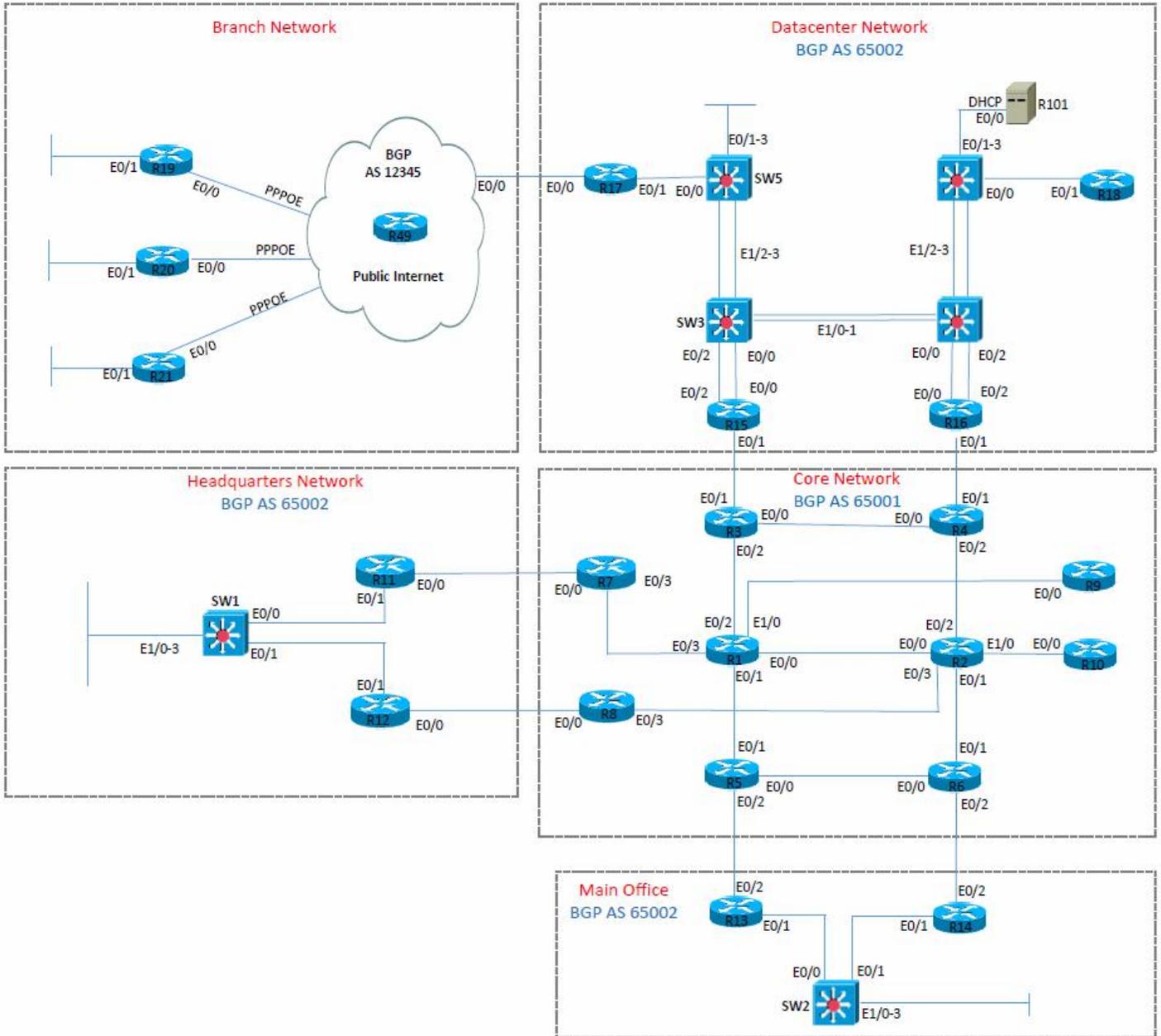
**CCIE Routing and Switching V5**

**Ver 2.2**

**(Passed ver.)**

Diagram 1 Jameson's Layer 2 Connections

JAMESON'S loopback:10.255.1.N  
(N=device ID)



### Section 1 – Layer 2 Technologies

#### 1.1 Jameson's Datacenter: Access ports

There has been pre-configured in Jameson's datacenter. SW3 is server and the other three switches are clients. Do not modify this configuration. Some other configuration was already started but it is your responsibility to verify and complete them.

Configure all four switches in Jameson's datacenter network (AS 65002) as per the following requirements:

- All unused ports must be configured in VLAN 999 and administratively shutdown. Refer to "Table 1: Jameson's VLAN to Port Mapping" to figure out which ports are used and unused.
- Access-ports must immediately transition to the forwarding state upon link up, as long as they do not receive a BPDU. Use a unique command per switch to enable this feature.
- If an access-port received a BPDU, it must automatically shutdown, generate a syslog and a SNMP trap.
- Use a unique command per switch to enable this feature.
- Ports that were shutdown must always rely on a manual intervention to recover.
- VLAN 911 (10.2.100.x/24) will be used as the management VLAN in Jameson's datacenter. Ensure that all datacenter switches are able to ping each other IP address in the management VLAN.
- SW5 and SW6 are low-end access switches and they do not have much processing power. Ensure that their only Layer 3 interfaces are Loopback0 and VLAN 911.
- SW3 and SW4 are robust and powerful distribution switches. Ensure that they maintain a Layer 3 interface for all local VLANs as well as all access VLANs, as specified in "Table 1: Jameson's VLAN to Port Mapping".

Score: 4  
points

**Solution:**

**SW3:**

vtp domain CCIE  
vtp mode server

vlan 999,911,34,100,153,173,156,164,184

interface e0/0  
switchport mode access  
switchport access vlan 156

interface e0/2  
switchport mode access  
switchport access vlan 153

interface range e0/1, e0/3, e2/0 - 3  
switchport mode access  
switchport access vlan 999  
shutdown

spanning-tree portfast default  
spanning-tree portfast bpduguard default  
snmp-server enable traps syslog

**SW4:**

vtp domain CCIE  
vtp mode client

interface e0/0  
switchport mode access

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switchport access vlan 156

interface e0/2

switchport mode access

switchport access vlan 164

interface range e0/1, e0/3, e2/0 - 3

switchport mode access

switchport access vlan 999

shutdown

spanning-tree portfast default

spanning-tree portfast bpduguard default

snmp-server enable traps syslog

SW5:

vtp domain CCIE

vtp mode client

interface range e0/0

switchport mode access

switchport access vlan 173

interface range e0/1 - 3

switchport mode access

switchport access vlan 100

interface range e1/0-1, e2/0 - 3

switchport mode access

switchport access vlan 999

shutdown

spanning-tree portfast default

spanning-tree portfast bpduguard default

snmp-server enable traps syslog

SW6:

vtp domain CCIE

vtp mode client

interface range e0/0

switchport mode access

switchport access vlan 184

interface range e0/1 - 3  
switchport mode access  
switchport access vlan 100

interface range e1/0-1, e2/0 - 3  
switchport mode access  
switchport access vlan 999  
shutdown

spanning-tree portfast default  
spanning-tree portfast bpduguard default  
snmp-server enable traps syslog

SW1:  
vlan 999

interface range e0/2-3, e2/0 - 3  
switchport mode access  
switchport access vlan 999  
shutdown

SW2:  
vlan 999

interface range e0/2-3, e2/0 - 3  
switchport mode access  
switchport access vlan 999  
shutdown

**Verification:**

SW3#sh vtp st

VTP Version capable : 1 to 3

VTP version running : 1

VTP Domain Name : CCIE

VTP Pruning Mode : Disabled

VTP Traps Generation : Disabled

Device ID : aabb.cc00.2100

Configuration last modified by 10.2.0.13 at 6-28-16 11:31:09

Local updater ID is 10.2.0.13 on interface VI34 (lowest numbered VLAN interface found)

**Feature VLAN:**

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VTP Operating Mode : Server

Maximum VLANs supported locally : 1005

Number of existing VLANs : 14

Configuration Revision : 2

MD5 digest : 0x68 0x26 0xAC 0x53 0x3F 0xED 0xCF 0x4E  
0xBE 0x5C 0x70 0x80 0xE1 0x5D 0xD9 0x71

SW3#

SW4#sh vtp st